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EXAMINER	
MARCHESCHI, M	
ART UNIT	PAPER NUMBER
1755	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

08/961,459

Applicant(s)

Wu et al.

Examiner

Michael Marcheschi

Group Art Unit

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☐ Responsive to communication(s) filed on _____

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-20 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-20 is/are rejected.

☒ Claim(s) 1-20 is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The drawings are objected to because:

(1) glass types I-III are not defined in the specification. What are these types (i.e. composition).

Correction is required.

Claims 1, 7, 11, 12 and 16 are objected to because of the following informalities:

In claim 1, line 3, the term 'the' should be changed to 'a';

line 3, after 'nm', the term '; and' should be inserted;

line 10, the **period** should be canceled;

line 11, the term 'Said' should be '**said**' (not capitalized).

In claim 7, line 3, the term 'the' should be changed to 'a';

line 3, after 'nm', the term '; and' should be inserted;

line 7, before 'will', the phrase the '**, the glass**' should be inserted;

line 8, the term '**immediately**' should be canceled;

line 10, the term 'Said' should be '**said**' (not capitalized);

line 14, the **period** should be canceled (after SiO₂).

In claim 11, line 8, the term 'the' should be changed to 'a';

line 8, after 'nm', the term '; and' should be inserted;

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line 14, the **period** should be canceled;

line 15, the term 'Said' should be '**said**' (not capitalized).

In claim 12, line 1, the term '**no.**' should be canceled.

In claim 16, line 7, the term 'the' should be changed to '**a**';

line 7, after 'nm', the term '**; and**' should be inserted.

Appropriate correction is required.

Claims 2-6, 8-10, 12-15 and 17-20 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form. The claims do not further limit the glass composition (i.e. its utility does not further limit the composition, per se).

Claims 1-20 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is indefinite because the phrases 'the transmittance', 'the electron beam darkening sensitivity', 'the liner portion' and 'the sensitivity curve' lack antecedent basis since a 'transmittance', an 'electron beam darkening sensitivity', a 'liner portion' and a 'sensitivity curve' have not been **literally** defined before. In addition, the phrase '2.4 to 10.2% total of

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photosensitivity inhibitor and RS suppressing agents including' is indefinite because the examiner is unclear as to if only TiO₂ or all the oxides following this phrase are used inhibitors and RS suppressing agents. This phrase should be canceled. Finally, a period is present in the body of the claim (line 11).

Claim 2 is indefinite as to the term 'predetermined' because according to applicants own definition, it merely means determined beforehand. See Joseph E. Seagram and Sons, Inc. v Marzall, Comr. Pat. 84 USPQ 180. This term should be canceled.

Claim 3 is indefinite as to the phrase 'can be utilized' since it renders the scope of the claim unclear. Is it used or not? In addition, the phrase 'general three dimensional surface in photoresist' is indefinite because the examiner is unclear as to what this encompasses. What does the term 'general' in this phrase encompass?

Claim 5 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**.

Claim 6 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**. In addition, the term/phrase 'e.g.' and 'such as' are indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The phrases 'and a host of other sensors' and 'future consumer electronics' are indefinite because they do not defined the claimed invention

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according to proper practice. What are these? Finally, the grouping of the claims (possible microstructures) is poorly drafted, thus rendering the scope of the claim unclear. The entire claim should be rewritten in a more clear and concise manner. The capital letters present in the body of the claim should be eliminated. In addition, the numbers and periods following the numbers should be eliminated and the numbers should be replaced with letters (i.e. a), b), c), d) and e)).

Claim 7 is indefinite because the phrases 'Another product of the present invention is' does not define the claimed invention in proper format. This phrase should be canceled. The phrase 'the transmittance' lacks antecedent basis since a 'transmittance' has not been **literally** defined before. The phrase 'value X' is indefinite because the examiner is unclear as to what this is, thus rendering the scope of the claim unclear. The phrase 'substantially in accordance with' is indefinite because the term 'substantially' renders the scope of this phrase unclear. This term should be canceled. In addition, the phrase '2.4 to 10.2% total of photosensitivity inhibitor and RS suppressing agents including' is indefinite because the examiner is unclear as to if only TiO₂ or all the oxides following this phrase are used inhibitors and RS suppressing agents. This phrase should be canceled. In addition, a period is present in the body of the claim (line 14-after SiO₂). The term 'predetermined' is indefinite because according to applicants own definition, it merely means determined beforehand. See Joseph E. Seagram and Sons, Inc. v Marzall, Comr. Pat. 84 USPQ 180. This term should be canceled. The phrase 'can be utilized' is indefinite since it renders the scope of the claim unclear. Is it used or not? The phrase 'general three dimensional

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surface in photoresist' is indefinite because the examiner is unclear as to what this encompasses.

What does the term 'general' in this phrase encompass?

Claim 9 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**.

Claim 10 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**. In addition, the term/phrase 'e.g.' and 'such as' are indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The phrases 'and a host of other sensors' and 'future consumer electronics' are indefinite because they do not define the claimed invention according to proper practice. What are these? Finally, the grouping of the claims (possible microstructures) is poorly drafted, thus rendering the scope of the claim unclear. The entire claim should be rewritten in a more clear and concise manner. The capital letters present in the body of the claim should be eliminated. In addition, the numbers and periods following the numbers should be eliminated and the numbers should be replaced with letters (i.e. a), b), c), d) and e)).

Claim 11 is indefinite because the phrases 'the transmittance', 'the electron beam darkening sensitivity', 'the liner portion' and 'the sensitivity curve' lack antecedent basis since a 'transmittance', an 'electron beam darkening sensitivity', a 'liner portion' and a 'sensitivity curve' have not been **literally** defined before. The term 'predetermined' is indefinite because according

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to applicants own definition, it merely means determined beforehand. See Joseph E. Seagram and Sons, Inc. v Marzall, Comr. Pat. 84 USPQ 180. The term 'pre-designated' is indefinite because the examiner is unclear as to what this encompasses, thus rendering the scope of the claim unclear. These terms should be canceled. In addition, the phrase '2.4 to 10.2% total of photosensitivity inhibitor and RS suppressing agents including' is indefinite because the examiner is unclear as to if only TiO₂ or all the oxides following this phrase are used inhibitors and RS suppressing agents. This phrase should be canceled. A period is present in the body of the claim (line 14). Finally, the last two lines of this claim are indefinite because the examiner is unclear as to what is being defined.

Claim 12 is indefinite as to the phrase 'can be utilized' since it renders the scope of the claim unclear. Is it used or not? In addition, the phrase 'general three dimensional surface in photoresist' is indefinite because the examiner is unclear as to what this encompasses. What does the term 'general' in this phrase encompass?

Claim 14 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**.

Claim 15 is indefinite because claim 13 is not directed to a HEBS glass, thus rendering the scope of the claim unclear. In addition, the claim is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**. In addition, the term/phrase 'e.g.'

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and 'such as' are indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The phrases 'and a host of other sensors' and 'future consumer electronics' are indefinite because they do not define the claimed invention according to proper practice. What are these? Finally, the grouping of the claims (possible microstructures) is poorly drafted, thus rendering the scope of the claim unclear. The entire claim should be rewritten in a more clear and concise manner. The capital letters present in the body of the claim should be eliminated. In addition, the numbers and periods following the numbers should be eliminated and the numbers should be replaced with letters (i.e. a), b), c), d) and e).

Claim 16 is indefinite because the phrase 'the transmittance' lacks antecedent basis since a 'transmittance' has not been **literally** defined before. The term 'predetermined' is indefinite because according to applicant's own definition, it merely means determined beforehand. See Joseph E. Seagram and Sons, Inc. v. Marzall, Comr. Pat. 84 USPQ 180. The term 'pre-designated' is indefinite because the examiner is unclear as to what this encompasses, thus rendering the scope of the claim unclear. These terms should be canceled. In addition, the phrase '2.4 to 10.2% total of photosensitivity inhibitor and RS suppressing agents including' is indefinite because the examiner is unclear as to if only TiO₂ or all the oxides following this phrase are used as inhibitors and RS suppressing agents. This phrase should be canceled. Finally, the last two lines of this claim are indefinite because the examiner is unclear as to what is being defined.

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Claim 17 is indefinite as to the phrase 'can be utilized' since it renders the scope of the claim unclear. Is it used or not? In addition, the phrase 'general three dimensional surface in photoresist' is indefinite because the examiner is unclear as to what this encompasses. What does the term 'general' in this phrase encompass?

Claim 18 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**.

Claim 19 is indefinite because the microstructures are not defined is proper Markush terminology. The phrase 'microstructures include' should be changed to **'microstructure is selected from the group consisting of'**. In addition, the term/phrase 'e.g.' and 'such as' are indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d). The phrases 'and a host of other sensors' and 'future consumer electronics' are indefinite because they do not defined the claimed invention according to proper practice. What are these? Finally, the grouping of the claims (possible microstructures) is poorly drafted, thus rendering the scope of the claim unclear. The entire claim should be rewritten in a more clear and concise manner. The capital letters present in the body of the claim should be eliminated. In addition, the numbers and periods following the numbers should be eliminated and the numbers should be replaced with letters (i.e. a), b), c), d) and e).

Claim 20 is indefinite because the examiner is unclear as to what this claim encompasses, thus rendering the scope of the claim unclear. The phrase 'the write scheme' is indefinite because

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it lacks antecedent basis since a 'write scheme' has not been **literally** defined before. In addition, what is this? The phrase 'is incorporated herein by reference' is indefinite because it does not define the claimed invention according to proper practice. A claim cannot include the phrase 'incorporated herein by reference'. The phrase 'substantially represented by the sensitivity curves corresponding to that of the chosen write scheme of table 2' is indefinite because the examiner is unclear as to what these curves encompass (the examiner cannot determine these curves and therefore the scope of the claim is unclear). Finally, the phrase 'write scheme of table 2' is indefinite because table 2 does not literally define a write scheme. Table 2 sets forth various formulas. Are these the write schemes? The table should have literal basis for the write schemes.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

¹⁻²⁰
Claims are rejected under 35 U.S.C. 103(a) as being unpatentable over either (1) Wu (771), (2) Wu (303), (3) Wu (517), (4) Wu (366) or (5) Wu (104).

Wu (771) teach in column 8, lines 8-16 and column 9, lines 3-9, a HEBS glass comprising all of the claimed components in amounts which overlap the claimed amounts.

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Wu (303) teach in column 8, lines 3-11 and lines 64-68, a HEBS glass comprising all of the claimed components in amounts which overlap the claimed amounts.

Wu (517) teach in column 8, lines 14-24 and column 9, lines 10-16, a HEBS glass comprising all of the claimed components in amounts which overlap the claimed amounts.

Wu (366) teach in column 7, line 63-column 8, line 5 and column 8, lines 58-64, a HEBS glass comprising all of the claimed components in amounts which overlap the claimed amounts.

Wu (104) teach in column 6, lines 47-55 and column 7, lines 41-47, a HEBS glass comprising all of the claimed components in amounts which overlap the claimed amounts.

All the references teach HEBS glasses having the same components in amounts which overlap the claimed amounts and therefore the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have selected the overlapping portion of the range disclosed by the reference because overlapping ranges have been held to be a prima facie case of obviousness, see *In re Malagari*, 182 U.S.P.Q. 549. With respect to the characteristics, although the references might not literally define these, since the products are otherwise the same, one would expect these values to be the same also (obvious) since they are a function of the material characteristics of the end-product. Finally, applicants provide various uses for the glass and intended use provide no patentable weight to a known composition. Since the composition is the same, the examiner fails to see any patentable subject matter.

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In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

"A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548.
Evidence of unexpected results must be commensurate in scope with the subject matter claimed.
In re Linder 173 USPQ 356.

The additional references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Marcheschi whose telephone number is (703) 308-3815. The examiner can be normally be reached on Monday through Thursday between the hours of 8:30-6:00 and every other Friday between the hours of 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiners supervisor, Mark L. Bell, can be reached at (703) 308-3823.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Michael Marcheschi
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3/4/99



MICHAEL MARCHESCHI
PRIMARY EXAMINER